SECTION 314
AGGREGATE SUBBASE

314.1-DESCRIPTION:

This work shall consist of furnishing, spreading, and compacting one or more courses of aggregate on a prepared subgrade in accordance with these Specifications, and in reasonably close conformity with the lines, grades, thicknesses, and typical cross sections shown on the Plans or established by the Engineer.

Subbase aggregates are designated as Grade 1 and Grade 2. The grade of aggregate subbase will be shown on the Plans.

314.2-MATERIALS:

314.2.1-General: All materials will be approved by the Engineer prior to use.

The material shall be of such quality that it will bind readily to form a firm, stable subbase. Should the character of the material be such that insufficient fine or coarse materials are produced to properly bind and stabilize the subbase, the Contractor shall furnish additional approved fine or coarse materials to accomplish stabilization.

314.2.2-Grade 1 Subbase Aggregate: Grade 1 subbase aggregate shall be composed of crushed stone, crushed gravel, crushed slag, crushed chert, crushed red dog, or a combination thereof.

Material shall conform to the requirements of 704.6, Class 5, except that (1) the percent passing the No. 200 (75 µm) sieve shall not exceed 15, (2) the liquid limit and plasticity index requirements will be waived, and (3) the amount of deleterious material shall be a maximum of 10 percent.

314.2.3-Grade 2 Subbase Aggregate: Grade 2 subbase aggregate shall be composed of stream bed or pit gravel, shale, chert, or red dog, unless one type is specifically called for on the Plans.

The material shall not have a maximum dimension greater than two-thirds the thickness of the course being placed. The material shall not contain more than 10 percent by weight of coal, clay, or other deleterious substances. The plasticity index shall be not greater than six as determined by ASTM D 424 and the liquid limit shall be not greater than 25 as determined by ASTM D 423, both reported to the nearest whole number.

Red dog material shall meet the requirements of the second paragraph of 314.2.2.

CONSTRUCTION METHODS

314.3-EQUIPMENT:

Any machine, combination of machines, or equipment which will handle the material without undue segregation and produce the completed subbase meeting these Specifications for handling, spreading, moistening, mixing, and compacting may be used when approved by the Engineer.

314.4-PLACING:

Prior to the placing of any subbase course material on the subgrade, the subgrade shall meet the applicable requirements of 207.9 or 228. The profile grade of the subgrade shall be such that the specified thickness of the subbase will be obtained. No subbase shall be placed when the subgrade is frozen or when it is sufficiently wet that its surface can be marred by construction equipment.

The subbase shall be placed and shaped on the prepared subgrade, or any other surface, in layers to achieve the compacted thickness shown on the Plans. When more than one layer is required, each layer shall be shaped and compacted to the specified density before the succeeding layer is placed. Each layer shall be kept at least 500 ft. (150 meters) ahead of the succeeding layer. Tailgating will not be permitted. If power graders are used for spreading, the material shall be placed in windrows, uniformly and thoroughly mixed, prior to final spreading and compaction.

314.5-COMPACTING:

Quality control and acceptance for compaction of aggregate subbase shall be in accordance with 307.2.1 through 307.2.4.1 and 717. Each layer of aggregate subbase shall be compacted to the requirements in 717. Water shall be uniformly applied over the subbase materials during compaction in the amount necessary for proper consolidation. The surface of each layer shall be maintained during the compaction operations in such a manner that a uniform texture is produced and the aggregate firmly keyed. The surface of the top layer of the subbase course shall be carefully trued byblading if necessary.

314.6-TOLERANCE:

The completed surface shall not vary more than ½ in. (13 mm) above or below plan grade. Deviations shall be corrected by scarifying, adding additional approved aggregate if necessary, reshaping, andrecompacting.

The subbase course shall be checked for proper thickness after final compaction. The Contractor shall refill all test holes with approved material and adequately recompact the material.

Any deficiency in total thickness of the subbase in excess of1 in. (25 mm) shall be corrected.

314.7-MAINTENANCE:

The surface of the completed subbase shall be protected against the loss of fine material by the addition of moisture when necessary, and the surface shall be maintained in a satisfactory and smooth condition until such time that it is covered by a succeeding course or finally accepted.

314.8-METHOD OF MEASUREMENT:

The quantity of work done will be measured in cubic yards (meters), complete in place and accepted, as determined from the lines, dimensions, and cross sections shown on the Plans or authorized in writing.

Subbase constructed outside the lines, dimensions, and cross sections shown on the Plans or designated will not be measured for payment.

314.9-BASIS OF PAYMENT:

The quantities, determined as provided above, will be paid for at the contract unit price bid for the items listed below, which prices and payments shall be full compensation for furnishing all the materials and doing all the work prescribed in a workmanlike and acceptable manner, including water, labor, tools, equipment, supplies, and incidentals necessary to complete the work.

314.10-PAY ITEMS:

ITEM	DESCRIPTION	UNIT
314001-*	SUBBASE AGGREGATE, GRADE “grade”	CUBIC YARD (METER)

*Sequence number